

REMARKS

Reconsideration is respectfully requested in view of any changes to the claims and the remarks herein. Please contact the undersigned to conduct a telephone interview in accordance with MPEP 713.01 to resolve any remaining requirements and/or issues prior to sending another Office Action. Relevant portions of MPEP 713.01 are included on the signature page of this amendment.

The specification has been amended to overcome the objection thereto in Section 1 of the Office Action (OA) at page 2 thereof.

Claims 36, 45-49, 52, 55, 59-60, 62 and 64 have been rejected under 35 USC 112, first paragraph. In claim 36, the recitation of "The flexible elements includes a protuberance at an end thereof" is supported throughout the specification, in particular and incorporated US Patent 5,371,654 by original claim 1, line 4-5, which recites "elongated electrical conductor's having a protuberance at one thereof" and the specification teaches "wires to flex under pressure" at page 13, line 4-5 from the bottom. As to claim 45 "probe card" is a term of the art that by the description is supported throughout the specification. To further the progress of progression of this application for claim 45 has been amended to recite "a structure comprising a probe assembly" and the element "Probe Card" has been deleted from the claim. Claims 46-48 depend from claim 45.

As to claim 49, the Examiner states that there is no support in the specification for "a plurality of first substrates adopted to be mounted to a second substrate". Applicants respectfully disagree. For example, Figure 16 shows an electrical interconnection structure providing electrical connection from side 81 to side 108. Added Figure 17 (Figure 1 of incorporated US Patent 5,371,654), shows electrical interconnectors 249 and Figure 20 (Figure 4 of Incorporated US Patent 5,371,654) shows a plurality of electrical interconnectors 249 on substrate 280. Incorporated US patent 5,371,654 teaches in regards to Fir. 20 (added Fig. 36 herein) "multiple substrates 210 each having a group of wires 212 disposed thereon." The term multiple substrates means a

plurality of substrates. Thus, the specification supports a plurality of electrical interconnection structures of Fig. 16 on the substrate 280 in place of the electrical interconnection structures 249 of Fig. 17 and 20. claim 49. Added claim 78 corresponds with "a plurality" changed to "at least one" and added claim 83 corresponds to claim 49 with "a plurality" deleted.

As to claim 52, the Examiner states that there is no support for "there are a plurality of said second substrates mounted to said first substrate." Applicants respectfully disagree for the reasons given above.

Claims 42, 45-48 and 57 have been rejected under 35 USC 112, second paragraph. In regards to claim 42, the Examiner states "it is unclear how the 'socket' is interrelated and associated with the first and second substrates in order to be used as an alignment feature". Claim 42 has been amended to recite "a socket, which electrically interconnects the first substrate and the second substrate in a substantially fixed position with respect to each other" which is essentially the meaning of the term "socket" as understood by a person of skill in the art.

In regard to claim 45, the term "probe card" has been deleted. In regards to claim 47, the term "top structure" has been replaced by "protuberance".

At page 3, paragraph 4, of the Office Action, the Examiner objects to the specification. In response thereto applicants have copied the entire text of US patent 5,371,654, which is incorporated by reference in the specification at pages 6, 7 and 12. (See page 10 of applicants' response dated May 7, 2002.) Figures 17-39 have been added, which are drawings 1-23 of US 5,371,654. No new matter is added.

Claims 29-30, 33-35, 37-44, 50-51, 53-54, 56, 58, 61, 63, have been rejected over Collins et al. Applicants respectfully disagree. The Examiner states that "Collins et al. discloses ... a plurality of flexible contact elements (18) " The Examiner points to no teaching to support this statement. Collins et al. teaches away from applicants'

invention. Collins et al. teaches at Col. 3, line 68 to Col. 4, line 2 "The beams 18 elastically compress and deform due to axial force" (Emphasis added) and at Col. 5, lines 24-26 "The beam 18 is made of wire which elastically deforms and compresses when subjected to axial pressure" (Emphasis added.) and at Col. 6, lines 36-37 "when axial pressure is applied ... the beam 18 elastically compresses and deforms ." (Emphasis added." Thus Collins et al teaches away from "compliantly responding" as recited in independent claim 29 and in amended independent claims 34, 37, 42 and 43. "Deforming" as taught by Collins et al. is not "compliantly responding" as claimed by applicant.

In view of the changes to the claims and the remarks herein, the Examiner is respectfully requested to reconsider the above-identified application. If the Examiner wishes to discuss the application further, or if additional information would be required, the undersigned will cooperate fully to assist in the prosecution of this application.

Please charge any fee necessary to enter this paper and any previous paper to deposit account 09-0468.

If the above-identified Examiner's Action is a final Action, and if the above-identified application will be abandoned without further action by applicants, applicants file a Notice of Appeal to the Board of Appeals and Interferences appealing the final rejection of the claims in the above-identified Examiner's Action. Please charge deposit account 09-0468 any fee necessary to enter such Notice of Appeal.

In the event that this amendment does not result in allowance of all such claims, the undersigned attorney respectfully requests a telephone interview at the Examiner's earliest convenience.

MPEP 713.01 states in part as follows:

Where the response to a first complete action includes a request for an interview or a telephone consultation to be initiated by the examiner, ... the examiner, as soon as he or she has considered the effect of the response, should grant such request if it appears that the interview or consultation would result in expediting the case to a final action.

Respectfully submitted,

By. 

Dr. Daniel P. Morris, Esq.
Reg. No. 32,053
Phone No. (914) 945-3217

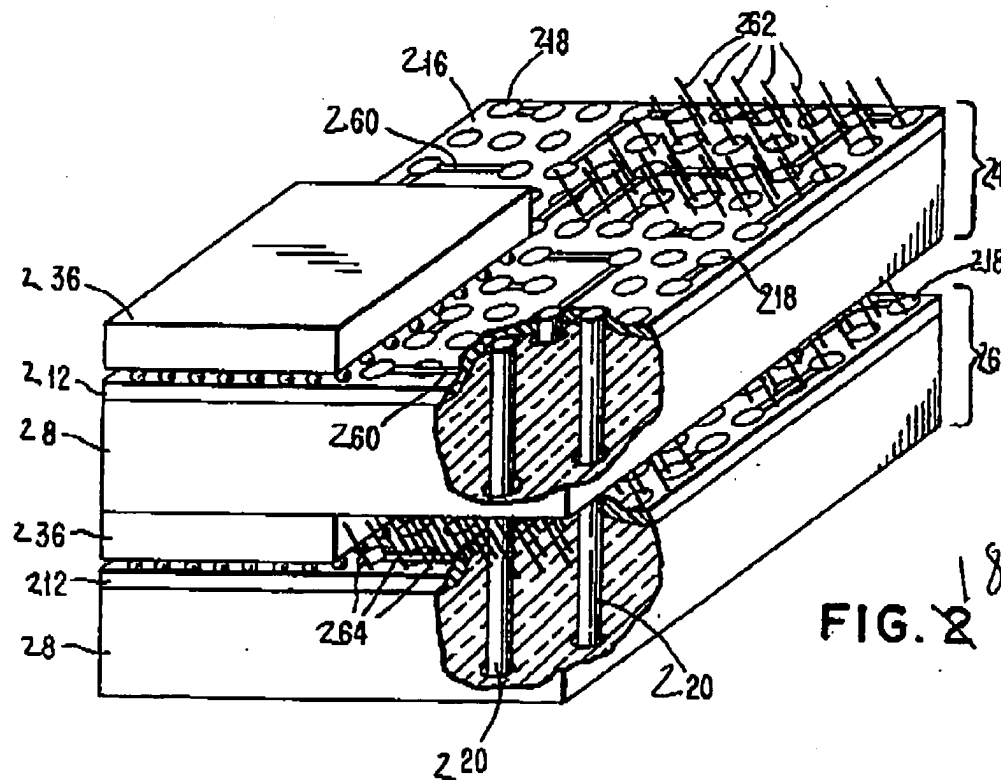
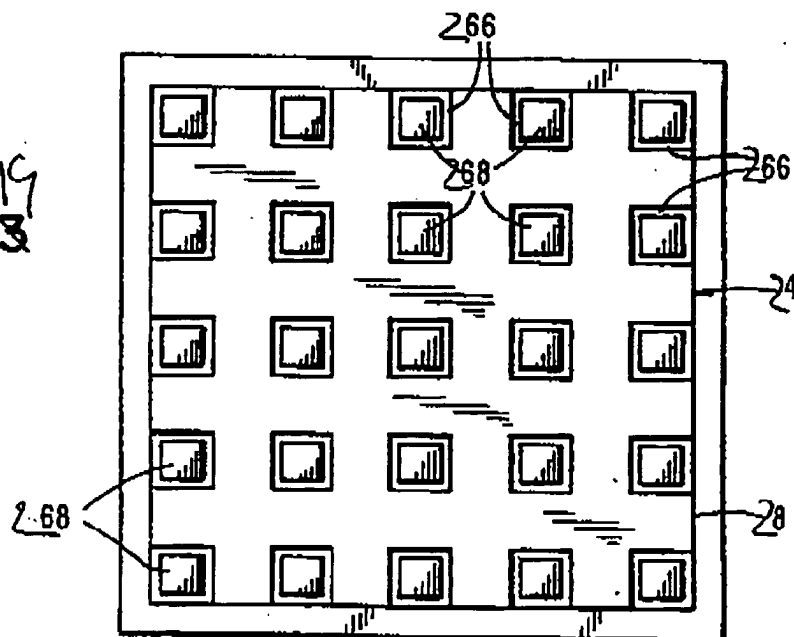
IBM Corporation
Intellectual Property Law Dept.
P. O. Box 218
Yorktown Heights, New York 10598

U.S. Patent

Dec. 6, 1994

Sheet 2 of 12

5,371,654

FIG. 3¹⁹

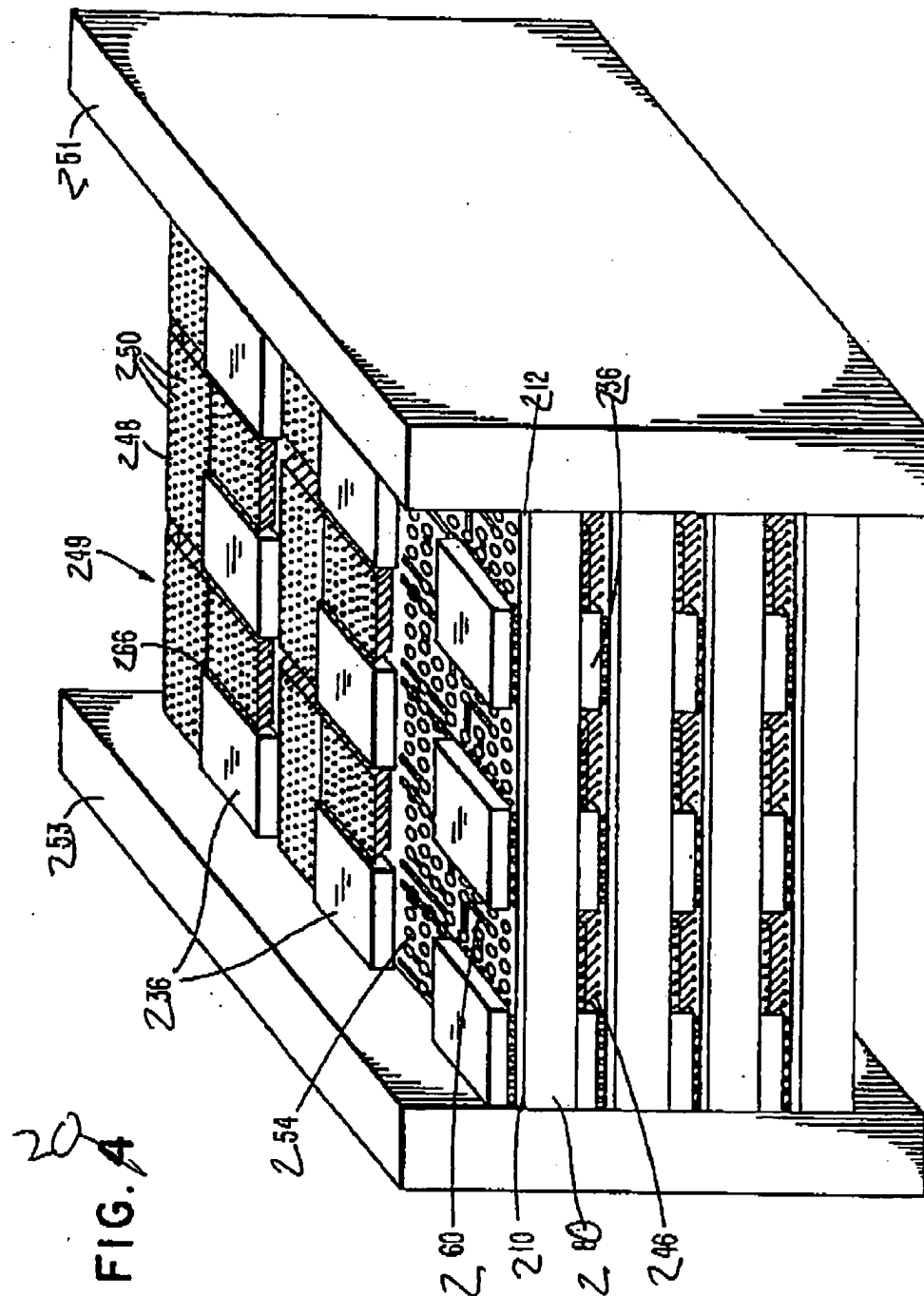
07/10/2002, EAST Version: 1.03.0002

U.S. Patent

Dec. 6, 1994

Sheet 3 of 12

5,371,654



U.S. Patent

Dec. 6, 1994

Sheet 5 of 12

5,371,654

FIG. 23

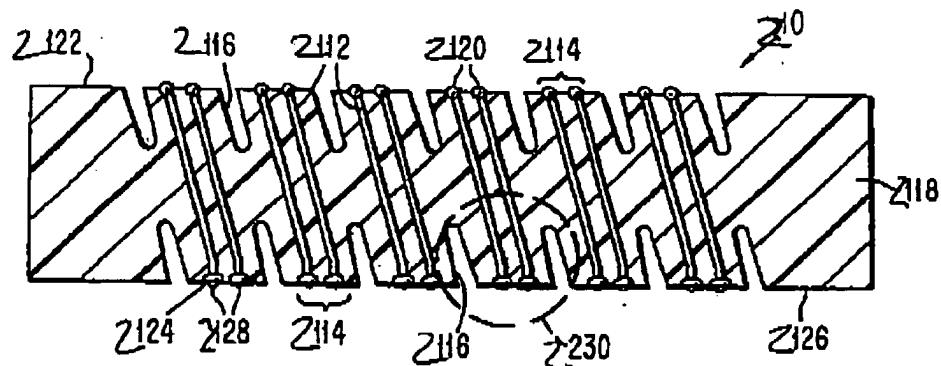
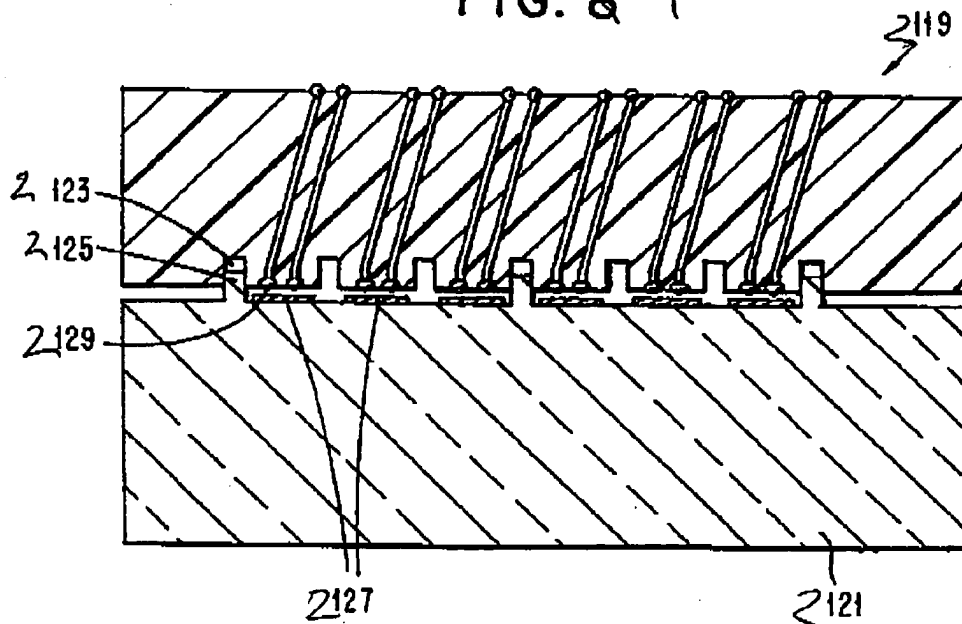


FIG. 24



U.S. Patent

Dec. 6, 1994

Sheet 6 of 12

5,371,654

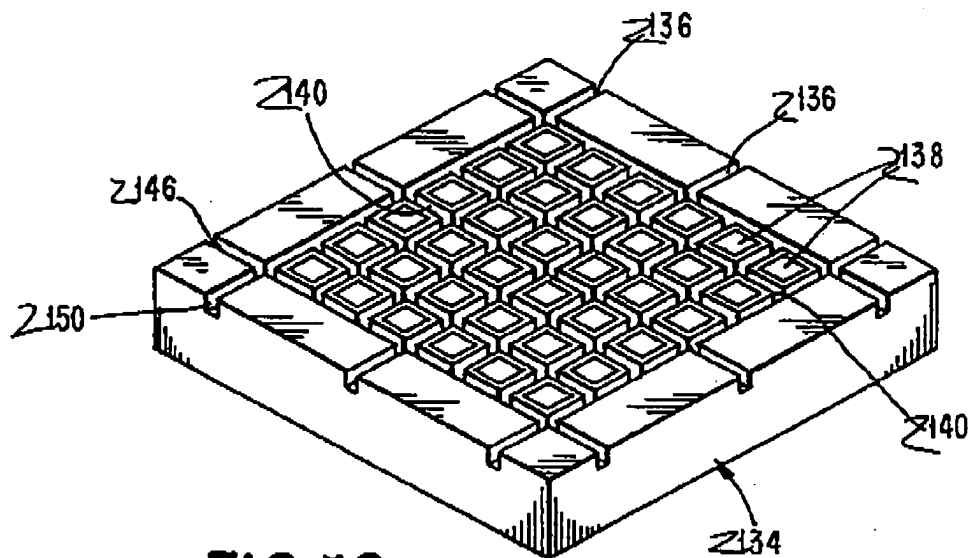
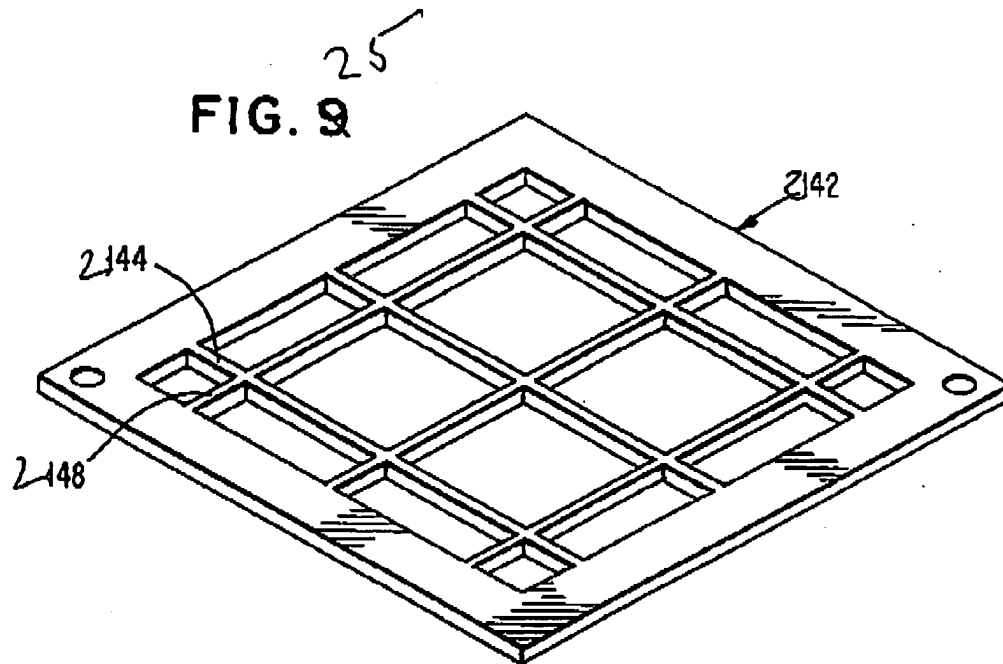


FIG. 10

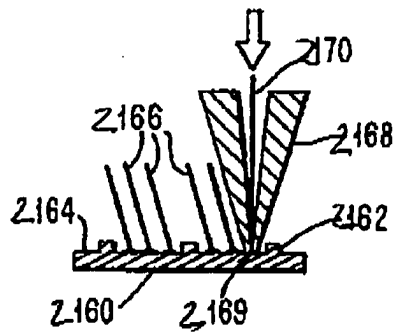
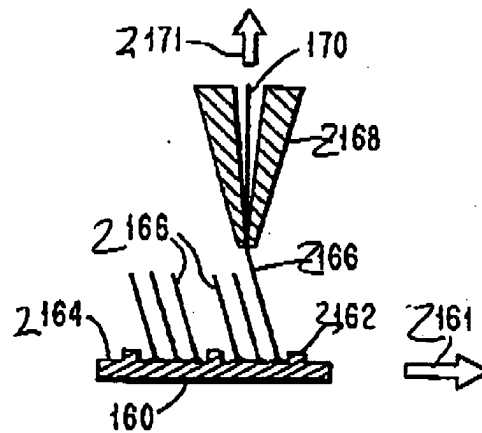
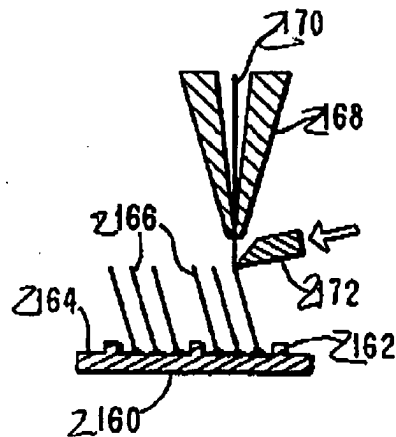
26

U.S. Patent

Dec. 6, 1994

Sheet 7 of 12

5,371,654

27
FIG. 1128
FIG. 1229
FIG. 13

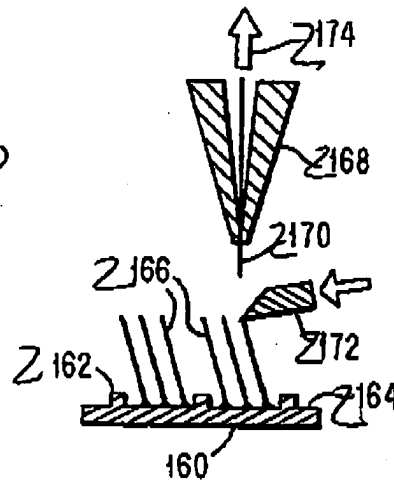
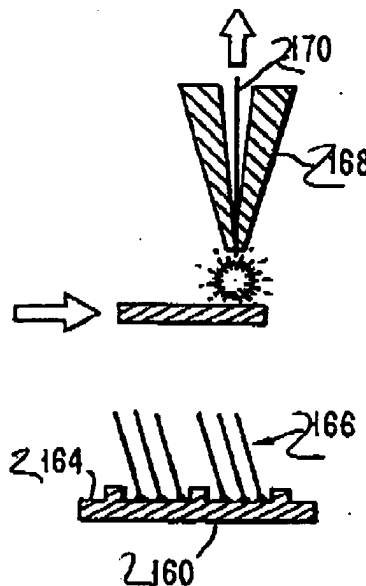
07/10/2002, EAST Version: 1.03.0002

U.S. Patent

Dec. 6, 1994

Sheet 8 of 12

5,371,654

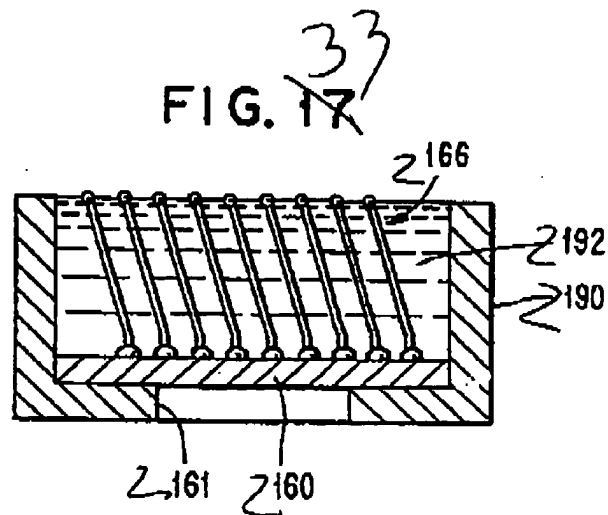
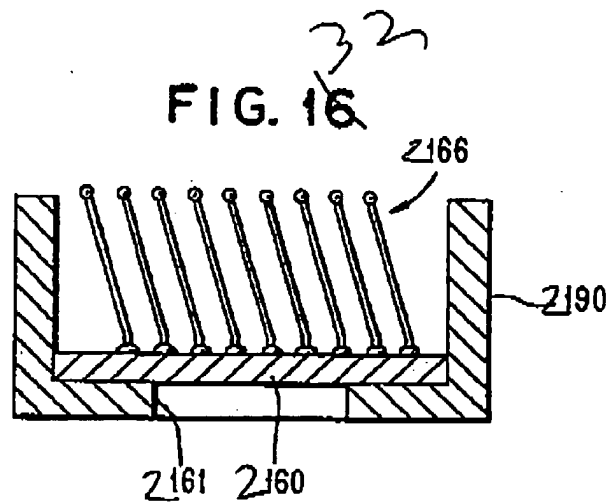
30
FIG. 1431
FIG. 15

U.S. Patent

Dec. 6, 1994

Sheet 9 of 12

5,371,654



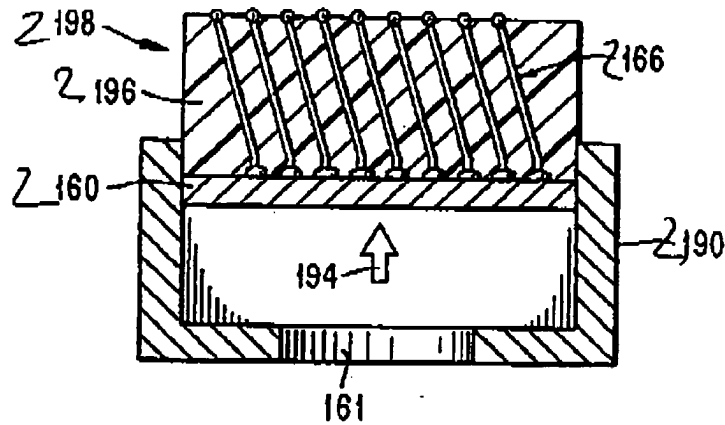
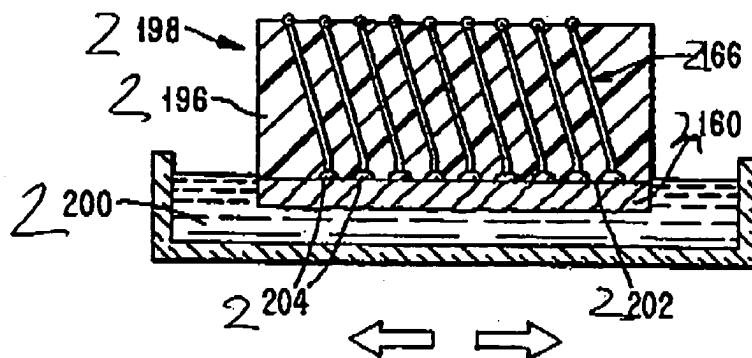
07/10/2002, EAST Version: 1.03.0002

U.S. Patent

Dec. 6, 1994

Sheet 10 of 12

5,371,654

34
FIG. 1835
FIG. 19

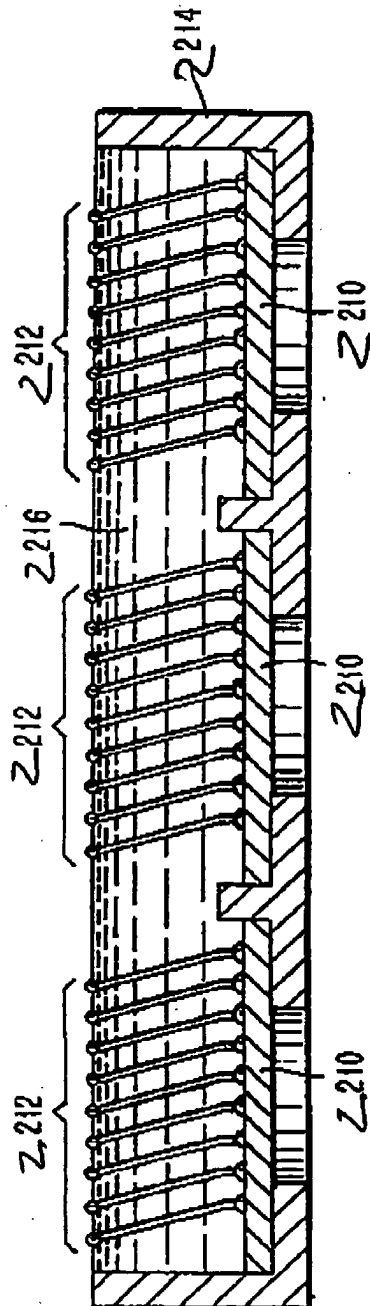
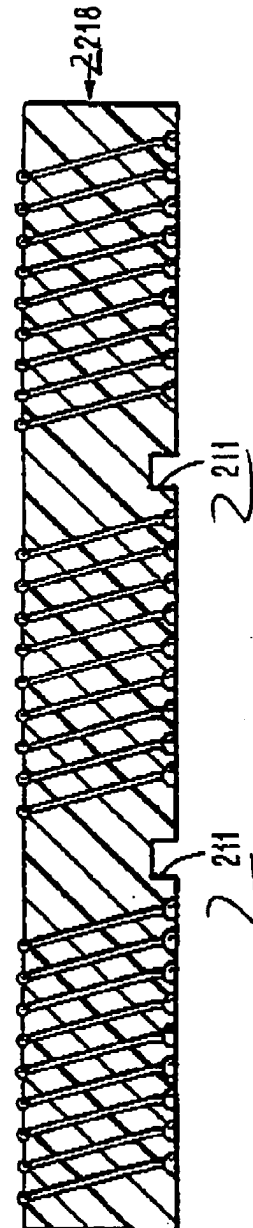
07/10/2002, EAST Version: 1.03.0002

U.S. Patent

Dec. 6, 1994

Sheet 11 of 12

5,371,654

FIG. 20
36FIG. 21
36

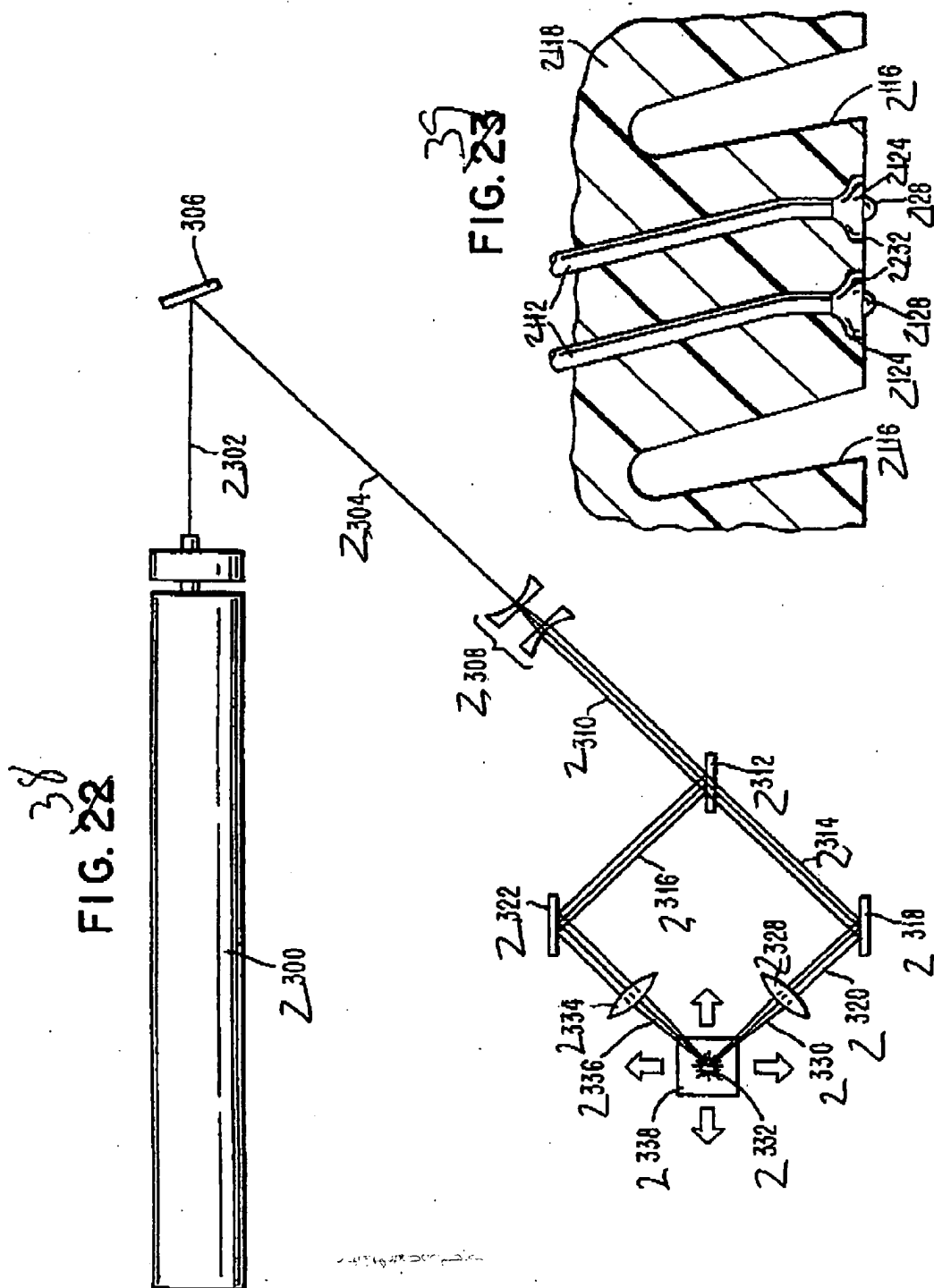
07/10/2002, EAST Version: 1.03.0002

U.S. Patent

Dec. 6, 1994

Sheet 12 of 12

5,371,654



07/10/2002, EAST Version: 1.03.0002